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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,423	09/19/2006	Bob Briscoe	36-2010	1267

23117 7590 01/17/2012

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EXAMINER	
GHOWRWAL, OMAR J	

ART UNIT	PAPER NUMBER
2463	

NOTIFICATION DATE	DELIVERY MODE
01/17/2012	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)
	10/593,423	BRISCOE ET AL.
	Examiner	**Art Unit**
	OMAR GHOWRWAL	2463

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-29* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-29* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Remarks

1. This Office action is considered fully responsive to the amendment filed 11/16/11.

2. The objections to the claims from the Office action dated 8/18/11 have been withdrawn because the claims have been amended accordingly.

Response to Arguments

Applicant's arguments with respect to claims 1-23, 28-29 have been considered but are moot in view of the new ground(s) of rejection. Note that although Examiner suggested a way to overcome claim objections in the independent claims in the Office action mailed out 8/18/11, the Applicant did not follow the Examiner's suggestion and has changed the scope of the independent claims with their amendments.

Regarding the limitations pertaining to "a different initial condition to the path characterization metric... in respect of previous data provided by said provider node" for independent claims 1, 9, 11, 20, 28, the scope has changed and the Kal reference is used in combination with Honeisen in teaching this limitation. See the rejection below for details.

Applicant also argues that a target condition in Honeisen is not predetermined (page 24, Remarks). The Examiner respectfully disagrees because the set codec bits are predetermined because they are set prior to the packet being transmitted.

Applicant also argues that the feedback is not a discrepancy because the feedback can be the same as the initial values sent (page 24, Remarks). The Examiner respectfully disagrees, because although this may be a case, the prior art specifically

mentions a case where “11111111” is modified, thus this case is what reads on the claim limitations.

Applicant's arguments filed 11/16/11 pertaining to claims 24-27 have been fully considered but they are not persuasive. Similarly, pertaining to independent claims 24 and 26, although Examiner suggested a way to overcome claim objections in the independent claims in the Office action mailed out 8/18/11, the Applicant did not follow the Examiner’s suggestion and has changed the scope of the independent claims with their amendments. However, Applicant alleges that for the same reasons as the previously addressed claims, these rejections are traversed (page 26, Remarks). The Examiner points out that claims 24 and 26 mention "assigning an (different) initial condition to *a further* path characterization metric...in respect of previous data provided by said provider node", which is not the same as "assigning a different initial condition to *the* path characterization metric….in respect of previous data provided by said provider node” as was mentioned in the prior independent claims. In the case of claims 24-27, the same prior art reads on the claim limitations—see the rejection below for details. Applicant also alleges that using a combination of references mean that the claims are allowable, and that undue use of hindsight is not allowed (page 26, Remarks).

In response to applicant's argument that the examiner has combined an excessive number of references (even though two references would hardly be deemed excessive), reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1, 3-6, 9-16, 20-23, 28-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2003/0115332 A1 to *Honeisen* in view of U.S. Patent No. 7,433,311 B1 to *Kalyanasundaram et al.* ("*Kal*").

5. As to **claim 1**, *Honeisen* discloses a data network (figs. 1-2, showing network of nodes) comprising:

a provider node, a receiver node, and a plurality of intermediate nodes (figs 1-2, 0061, 0077, UE1 = provider node, UE2 = receiver node, nodes in between them are

intermediate nodes), the provider node being arranged to provide data to at least one of said intermediate nodes or to the receiver node, said intermediate nodes being arranged to receive data and forward data to at least one other intermediate node or to the receiver node, and the receiver node being arranged to receive data from at least one intermediate node or from the provider node (figs. 1-2, para. 0061, 0077, sending SIP Invite from UE 1 through intermediate nodes, which forward SIP Invite to UE 2); wherein:

said data comprises at least a part which relates to a path characterization metric (fig. 4c, para. 0085-0088, SIP Invite contains AMR_MASK value (i.e. path characterization metric) that indicates which AMR bit rates UE1 is willing and able to support);

said provider node is arranged to assign an initial condition to the path characterization metric in respect of data provided by it (fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates);

said intermediate nodes are arranged to update the condition of the path characterization metric in respect of data they forward (para. 0088-0093, intermediate nodes modify the AMR_MASK when they cannot support the bit rate, and forward the SIP invite message);

said receiver node is arranged to make available for the provider node discrepancy information indicative of a measure of any discrepancy between the condition of the path characterization metric in respect of data received by it and a

predetermined target condition for the path characterization metric (para. 0096-0104, UE2 sends a reply message to UE1 after receiving SIP invite data, the message indicating bit rates not supported (condition of metric) by the nodes of the network, which differs from the predetermined target condition of all rates being supported (i.e. the message indicates the measure of discrepancy between what the UE1 requests and what the UE2 is capable of));

and said provider node is arranged to assign a different initial condition to the path characterization metric in respect of subsequent data provided by it in the event that it receives discrepancy information from said receiver node (para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested and what was provided in the reply, and generates a new message (i.e. subsequent data) that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies)), the initial condition assigned in respect of said subsequent data units differing from the initial condition assigned in respect of previous data units by a difference dependent on said discrepancy information (para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested and what was provided in the reply, and generates a new message with SIP header fields and an SDP body (i.e. subsequent data units) that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies); para. 0085, fig. 4c, the initial SIP Invite contains multiple fields and value (i.e. previous data units)--hence the SIP message generated (i.e. subsequent data units) by the UE1 after receiving a reply from UE2 assigns the chosen codec with respect to the previous SIP Invite (i.e. previous

data units) based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2)).

said provider node receives discrepancy information from said receiver node (para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested and what was provided in the reply, and generates a new message with SIP header fields and an SDP body (i.e. subsequent data units) that indicates a chosen codec to use).

Honeisen does not expressly disclose and said provider node is arranged to assign a different initial condition to the path characterization metric in respect of subsequent data provided by it in the event that it receives discrepancy information, the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information.

Kal discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated (i.e. assign a different initial condition) based on approximating the actual rate. Furthermore, communications occur at a new rate (i.e. subsequent data provided by it) which is different from the communications that occurred at the previous rate based on approximating the actual rate (i.e. in respect of subsequent data provided by it in the event that it receives discrepancy information, the initial condition assigned in

respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information) (fig. 2, col. 14, lines 19 to col. 15, line 11).

Honeisen and *Kal* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the new value of a resource setting as taught by Kal into the invention of Honeisen. The suggestion/motivation would have been to adjust allocation of a resource in a data communications channel (Kal, col. 9, lines 10-13).

As to claim 3, *Honeisen* and *Kal* further discloses a data network according to claim 1, wherein the condition assigned to the path characterization metric is a value, and the predetermined target condition is a value (para. 0086-0087, AMR_MASK takes an initial value of all 1's (i.e. predetermined target condition), each binary 1 indicates support, each binary 0 indicates no support--para. 0096, the condition received by the UE2 indicates modified values of 1's to show no support for particular rates). In addition, the same suggestion/motivation of claim 1 applies.

As to claim 4, *Honeisen and Kal* further discloses a data network according to claim 1, wherein in the event that said provider node assigns a different initial condition to the path characterization metric in respect of subsequent data provided by it, said different initial condition is assigned to decrease a corresponding discrepancy in respect of said subsequent data received by said receiver node (Honeisen, para. 0105-0106, figs. 1-2, the UE1 takes into consideration the discrepancies from what it initially

requested (predetermined target, previous data) and what was provided in the reply (eventual condition), and generates a new message with SIP header fields and an SDP body (i.e. subsequent data) that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies) sent to UE2; *Kal* discloses calculating a new value for a current resource setting that more closely approximates a value of an actual resource setting of the resource of the communications channel (fig. 2, item 202-2). Furthermore, this is performed by a client (provider) device (col. 14, lines 15-19) and the new value is sent to a network resource allocator (receiver) (fig. 2, item 202-3), i.e. discrepancy between the two values is decreased and this is sent to the receiver from the provider. Moreover, the reason for calculating a new value is based upon a detection of a negotiation event (col. 16, lines 14-16)). In addition, the suggestion/motivation would have been to adjust allocation of a resource in a data communications channel (Kal, col. 9, lines 10-13).

As to claim 5, *Honeisen* and *Kal* further disclose a data network according to claim 4, wherein said different initial condition is assigned to maximize a possibility that said corresponding discrepancy in respect of said subsequent data received by said receiver node will be zero (Kal, fig. 2, item 202-2, 202-3, more closely approximating a value, which pertains to having zero discrepancy). In addition, the same suggestion/motivation of claim 4 applies.

As to claim 6, *Honeisen* and *Kal* further discloses a data network according to claim 1, wherein an intermediate node is arranged to update the condition of the path

characterization metric in response to a path characteristic associated with that node (para. 0088-0093, intermediate nodes modify the AMR_MASK when they cannot support the bit rate). In addition, the same suggestion/motivation of claim 1 applies.

As to **claim 9**, *Honeisen* discloses a method for assigning path characterization metrics to data (figs. 1-2, para. 0061, 0077, sending SIP Invite from UE 1 through intermediate nodes, which forward SIP Invite to UE 2; fig. 4c, para. 0085-0088, SIP Invite contains AMR_MASK value (i.e. path characterization metric) that indicates which AMR bit rates UE1 is willing and able to support) in a data network comprising a provider node, a receiver node, and a plurality of intermediate nodes (figs 1-2, 0061, 0077, UE1 = provider node, UE2 = receiver node, nodes in between them are intermediate nodes), the provider node being arranged to provide data to at least one of said intermediate nodes or to the receiver node, said data comprising at least a part which relates to a path characterization metric, said intermediate nodes being arranged to receive data and forward data to at least one other intermediate node or to the receiver node, and the receiver node being arranged to receive data from at least one intermediate node or from the provider node (figs. 1-2, para. 0061, 0077, sending SIP Invite from UE 1 through intermediate nodes, which forward SIP Invite to UE 2; fig. 4c, para. 0085-0088, SIP Invite contains AMR_MASK value (i.e. path characterization metric) that indicates which AMR bit rates UE1 is willing and able to support); the method comprising steps of:

assigning an initial condition to the path characterization metric in respect of data provided by the provider node (fig. 4c, para. 0085-0088, UE1 assigns an initial value to

the AMR_MASK, the initial condition indicates it supports all available AMR rates (i.e. in respect of SIP invite data sent by UE1));

updating the condition of the path characterization metric in respect of data forwarded by said intermediate nodes (para. 0088-0093, intermediate nodes modify the AMR_MASK when they cannot support the bit rate);

monitoring a final condition of the path characterization metric in respect of data received by the receiver node, and determining discrepancy information indicative of a measure of any discrepancy between said final condition and a predetermined target condition for the path characterization metric (para. 0096-0104, UE2 sends a reply message to UE1 after receiving SIP invite, the message indicating bit rates not supported by the nodes of the network (final condition), which differs from the predetermined target condition of all rates being supported (i.e. the message indicates the measure of discrepancy between what the UE1 requests and what the UE2 is capable of)).

Honeisen does not expressly disclose assigning a different initial condition to the path characterization metric in respect of subsequent data provided by the provider node in the event that said discrepancy information indicates such a discrepancy in respect of previous data provided by the provider node, the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of said previous data by a difference dependent on said discrepancy information.

Kal discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an

actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. assign a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data provided by provider node) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. in respect of said subsequent data differing from the initial condition assigned in respect said previous data by a difference dependent on said discrepancy information) (fig. 2, col. 14, lines 19 to col. 15, line 11).

Honeisen and *Kal* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the new value of a resource setting as taught by Kal into the invention of Honeisen. The suggestion/motivation would have been to adjust allocation of a resource in a data communications channel (Kal, col. 9, lines 10-13).

As to claim 10, *Honeisen* and *Kal* further discloses a method according to claim 9, wherein the condition assigned to the path characterization metric is a value, and the predetermined target condition is a value (para. 0086-0087, AMR_MASK takes an initial value of all 1’s (i.e. predetermined target condition), each binary 1 indicates support, each binary 0 indicates no support--para. 0096, the condition received by the UE2 indicates modified values of 1's to show no support for particular rates). In addition, the same suggestion/motivation of claim 9 applies.

As to **claim 11**, *Honeisen* discloses a feedback node for enabling an initial condition to be assigned to a path characterization metric in respect of data to be forwarded through a data network (figs 1-2, 0061, 0077, UE1 = provider node, feedback node, UE2 = receiver node, nodes in between them are intermediate nodes; .fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates (i.e. initial condition), this being sent in an SIP invite (i.e. in respect to data to be forwarded)), said data network comprising a provider node, a receiver node and a plurality of intermediate nodes, said data comprising at least a part which relates to a path characterization metric (figs 1-2, 0061, 0077, UE1 = provider node, feedback node, UE2 = receiver node, nodes in between them are intermediate nodes; fig. 4c, para. 0085-0088, SIP Invite contains AMR_MASK value (i.e. path characterization metric) that indicates which AMR bit rates UE1 is willing and able to support); said provider node being arranged to assign an initial condition to the path characterization metric in respect of data, and to provide said data to at least one of said intermediate nodes or to the receiver node (fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates (i.e. in respect of SIP invite data sent by UE1), figs. 1-2, SIP invite forwarded to intermediate nodes which forward to receiver); said intermediate nodes being arranged to receive data from said provider node or from one or more other intermediate nodes, to update a condition of the path characterization metric in respect of data received by them, and to forward data to at least one other intermediate node or to the receiver node (para. 0088-0093, intermediate nodes modify the AMR_MASK

when they cannot support the bit rate received in SIP invite from provider, forward to each other then to UE2); and said receiver node being arranged to receive data from at least one intermediate node or from the provider node, and to make available for the feedback node information relating to the path characterization metric in respect of data received by it (para. 0096-0104, UE2 sends a reply message to UE1 after receiving SIP invite from intermediate node, the message indicating bit rates not supported by the nodes of the network, which differs from the predetermined target condition of all rates being supported (i.e. the message indicates the measure of discrepancy between what the UE1 requests and what the UE2 is capable of)), said feedback node comprising:

at least one message processor (para. 0107, fig. 5, UE1, UE2 contain microprocessor that control operation of node), said feedback node receives information indicative of a discrepancy between a predetermined target condition for the path characterization metric and the condition of the path characterization metric in respect of previous data received by said receiver node (para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested and what was provided in the reply (i.e. previous data), and generates a new message (i.e. subsequent data) that indicates a chosen codec to use).

Honeisen does not expressly disclose arranged to enable a different initial condition to be assigned to the path characterization metric…the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information.

Kal discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. enable a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information) (fig. 2, col. 14, lines 19 to col. 15, line 11).

Honeisen and *Kal* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the new value of a resource setting as taught by Kal into the invention of Honeisen. The suggestion/motivation would have been to adjust allocation of a resource in a data communications channel (Kal, col. 9, lines 10-13).

As to claim 12, *Honeisen* and *Kal* further discloses a feedback node according to claim 11, wherein the condition assigned to the path characterization metric is a value, and the predetermined target condition is a value (Honeisen, para. 0086-0087,

AMR_MASK takes an initial value of all 1's (i.e. predetermined target condition), each binary 1 indicates support, each binary 0 indicates no support--para. 0096, the condition received by the UE2 indicates modified values of 1's to show no support for particular rates). In addition, the same suggestion/motivation of claim 11 applies.

As to claim 13, *Honeisen and Kal* further discloses a feedback node according to claim 11, wherein in the event that a different initial condition is assigned to the path characterization metric in respect of subsequent data, said different initial condition is assigned to decrease a corresponding discrepancy in respect of said subsequent data received by said receiver node (Honeisen, para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested (predetermined target, previous data) and what was provided in the reply (eventual condition), and generates a new message with SIP header fields and an SDP body (i.e. subsequent data) that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies) sent to UE2; *Kal* discloses calculating a new value for a current resource setting that more closely approximates a value of an actual resource setting of the resource of the communications channel (fig. 2, item 202-2). Furthermore, this is performed by a client (provider) device (col. 14, lines 15-19) and the new value is sent to a network resource allocator (receiver) (fig. 2, item 202-3), i.e. discrepancy between the two values is decreased and this is sent to the receiver from the provider. Moreover, the reason for calculating a new value is based upon a detection of a negotiation event (col. 16, lines 14-16)). In addition, the suggestion/motivation would

have been to adjust allocation of a resource in a data communications channel (Kal, col. 9, lines 10-13).

As to claim 14, *Honeisen* and *Kal* further discloses a feedback node according to claim 11, said feedback node also serving as said provider node in said network (Honeisen, figs 1-2, 0061, 0077, UE1 = provider node, feedback node, UE2 = receiver node, nodes in between them are intermediate nodes; note from claim 11 the UE1 provides the feedback functions). In addition, the same suggestion/motivation of claim 11 applies.

As to claim 15, *Honeisen* and *Kal* further discloses a feedback node according to claim 14, said feedback node being arranged to assign a different initial condition to the path characterization metric in respect of subsequent data in the event that it receives, from said receiver node, a measure of a discrepancy between said predetermined target condition for the path characterization metric and the condition of the path characterization metric in respect of previous data received by said receiver node (para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested and what was provided in the reply, and generates a new message with SIP header fields and an SDP body (i.e. subsequent data) that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies); para. 0085, fig. 4c, the initial SIP Invite contains multiple fields and value (i.e. previous data)--hence the SIP message generated (i.e. subsequent data) by the UE1 after receiving a reply from UE2 assigns the chosen codec with respect to the previous SIP Invite (i.e. previous data) based on a difference pertaining to which codecs are supported by the

UE2 (i.e. discrepancy information between UE1 and UE2); *Kal* discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. enable a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information) (fig. 2, col. 14, lines 19 to col. 15, line 11)). In addition, the same suggestion/motivation of claim 14 applies.

As to claim 16, *Honeisen and Kal* further discloses a feedback node according to claim 14, said feedback node being arranged to assign a different initial condition to the path characterization metric in respect of subsequent data in the event that it receives, from said receiver node, information indicative of the condition of the path characterization metric in respect of previous data received by said receiver node, and determines that there is a discrepancy between said condition of the path characterization metric and said predetermined target condition for the path characterization metric (Honeisen, para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested and what was provided in the reply,

and generates a new message with SIP header fields and an SDP body (i.e. subsequent data) that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies); para. 0085, fig. 4c, the initial SIP Invite contains multiple fields and value (i.e. previous data)--hence the SIP message generated (i.e. subsequent data) by the UE1 after receiving a reply from UE2 assigns the chosen codec with respect to the previous SIP Invite (i.e. previous data) based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2); *Kal* discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. enable a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information) (fig. 2, col. 14, lines 19 to col. 15, line 11)). In addition, the same suggestion/motivation of claim 14 applies.

As to **claim 20**, *Honeisen* discloses a method of providing data in a data network comprising a provider node, a receiver node and a plurality of intermediate nodes, the provider node being arranged to provide data to at least one of said intermediate nodes

or to the receiver node, said data comprising at least a part which relates to a path characterization metric (figs 1-2, 0061, 0077, UE1 = provider node, feedback node, UE2 = receiver node, nodes in between them are intermediate nodes; .fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates (i.e. metric), this being sent in an SIP invite (i.e. data containing metric)); said intermediate nodes being arranged to receive data from said provider node or from one or more other intermediate nodes, to update a condition of the path characterization metric in respect of data received by them, and to forward data to at least one other intermediate node or to the receiver node (para. 0088-0093, intermediate nodes modify the AMR_MASK (received from provider node) when they cannot support the bit rate, forward the message to each other then to UE2); and said receiver node being arranged to receive data from at least one intermediate node or from the provider node, and to make available for the provider node information indicative of a discrepancy between an eventual condition of the path characterization metric in respect of data received by it and a predetermined target condition for the path characterization metric (para. 0096-0104, UE2 sends a reply message to UE1 after receiving SIP invite from intermediate node, the message indicating bit rates not supported by the nodes of the network, which differs from the predetermined target condition of all rates being supported (i.e. the message indicates the measure of discrepancy between what the UE1 requests (predetermined target) and what the UE2 is capable of (eventual))); the method comprising the steps of:

assigning an initial condition to the path characterization metric in respect of data (fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates (i.e. in respect of SIP invite data sent by UE1));

providing said data to at least one of said intermediate nodes (para. 0088-0093, intermediate nodes modify the AMR_MASK (received from provider node) when they cannot support the bit rate, forward the message to each other then to UE2);

receiving information relating to said eventual condition of the path characterization metric in respect of previously-provided data received by said receiver node (para. 0096-0104, UE2 sends a reply message to UE1 after receiving SIP invite from intermediate node, the message indicating bit rates not supported by the nodes of the network, which differs from the predetermined target condition of all rates being supported (i.e. the message indicates the measure of discrepancy between what the UE1 requests (predetermined target) and what the UE2 is capable of (eventual)), this is in respect to the original SIP invite received at receiver node);

and receipt of discrepancy information indicative of a measure of any discrepancy between said eventual condition of the path characterization metric and a predetermined target condition for the path characterization metric (para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested (predetermined target) and what was provided in the reply (i.e. previous data, eventual condition), and generates a new message (i.e. subsequent data) that indicates a

chosen codec to use (i.e. assign a different initial condition based on received discrepancies)).

Honeisen does not expressly disclose assigning a different initial condition to the path characterization metric in respect of subsequent data in the event…the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information.

Kal discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. enable a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information) (fig. 2, col. 14, lines 19 to col. 15, line 11).

Honeisen and *Kal* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the new value of a resource setting as taught by Kal into the

invention of Honeisen. The suggestion/motivation would have been to adjust allocation of a resource in a data communications channel (Kal, col. 9, lines 10-13).

As to claim 21, *Honeisen* and *Kal* further discloses a method according to claim 20, wherein the condition assigned to the path characterization metric is a value, and the predetermined target condition is a value (Honeisen, para. 0086-0087, AMR_MASK takes an initial value of all 1's (i.e. predetermined target condition), each binary 1 indicates support, each binary 0 indicates no support--para. 0096, the condition received by the UE2 indicates modified values of 1's to show no support for particular rates). In addition, the same suggestion/motivation of claim 20 applies.

As to claim 22, *Honeisen and Kal* further discloses a method according to claim 20, said receiver node being arranged to make available for the provider node a measure of a discrepancy between said predetermined target condition for the path characterization metric and said eventual condition of the path characterization metric in respect of previous data received, whereby to enable said provider node to assign a different initial condition to the path characterization metric in respect of subsequent data (Honeisen, para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested (predetermined target) and what was provided in the reply (eventual condition), and generates a new message with SIP header fields and an SDP body (i.e. subsequent data) that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies); para. 0085, fig. 4c, the initial SIP Invite contains multiple fields and value (i.e. previous data)--hence the SIP

message generated (i.e. subsequent data) by the UE1 after receiving a reply from UE2 assigns the chosen codec with respect to the previous SIP Invite (i.e. previous data) based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2); *Kal* discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. enable a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information) (fig. 2, col. 14, lines 19 to col. 15, line 11)). In addition, the same suggestion/motivation of claim 20 applies.

As to claim 23, *Honeisen and Kal* further discloses a method according to claim 20, said receiver node being arranged to make available for the provider node information indicative of the condition of said eventual path characterization metric in respect of previously received data, whereby to enable said provider node to assign a different initial condition to the path characterization metric in respect of subsequent data in the event that said provider node determines that there is a discrepancy between said condition of the path characterization metric and said predetermined

target condition for the path characterization metric (Honeisen, para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested (predetermined target) and what was provided in the reply (eventual condition), and generates a new message with SIP header fields and an SDP body (i.e. subsequent data) that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies); para. 0085, fig. 4c, the initial SIP Invite contains multiple fields and value (i.e. previous data)--hence the SIP message generated (i.e. subsequent data) by the UE1 after receiving a reply from UE2 assigns the chosen codec with respect to the previous SIP Invite (i.e. previous data) based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2); *Kal* discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. enable a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information) (fig. 2, col. 14, lines 19 to col. 15, line 11)). In addition, the same suggestion/motivation of claim 20 applies.

As to **claim 28**, *Honeisen* discloses a path characterization system for providing path characterization information in association with a data network, said data network comprising a plurality of nodes including a provider node, a receiver node, and at least one intermediate node, the provider node being arranged to provide data to at least one intermediate node or to the receiver node, an intermediate node being arranged to receive data and to forward data to at least one other intermediate node or to the receiver node, and the receiver node being arranged to receive data from the provider node or from at least one intermediate node (figs 1-2, 0061, 0077, UE1 = provider node, feedback node, UE2 = receiver node, nodes in between them are intermediate nodes; .fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates, this being sent in an SIP invite (i.e. data containing metric) to intermediate nodes which send to UE2); the path characterization system comprising:

a path characterization metric condition assigning means, associated with the provider node, arranged to assign an initial condition to a path characterization metric in the event that said provider node provides data (fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates (i.e. in respect of SIP invite data sent by UE1), para. 0107, microprocessor performs node functions);

a path characterization metric updating means, associated with an intermediate node, arranged to update the condition of the path characterization metric in the event that said node receives data (para. 0088-0093, intermediate nodes modify the

AMR_MASK (received from provider node) when they cannot support the bit rate, forward the message to each other then to UE2, para. 0110, processor in intermediate nodes control functions);

and a path characterization metric feedback means, associated with the receiver node, arranged to determine an eventual condition of the path characterization metric in the event that said receiver node receives said data, and to make available for the path characterization metric condition assigning means discrepancy information indicative of a measure of any discrepancy between the eventual condition of the path characterization metric and a predetermined target condition for the path characterization metric (para. 0085, para. 0102-0106, fig. 4c, the initial SIP Invite contains multiple fields and value--hence the SIP message generated by the UE1 after receiving a reply from UE2 (containing discrepancy information that shows difference between initial request (predetermined target) and what UE2 is capable of (eventual condition)) assigns the chosen codec with respect to the previous SIP Invite based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2), para. 0107, microprocessor performs node functions);

wherein in the event that feedback is made available indicative of such a discrepancy between the eventual condition of the path characterization metric and the predetermined target condition in relation to a previous path characterization metric (para. 0105-0106, the UE1 takes into consideration the discrepancies from what it initially requested (predetermined target) and what was provided in the reply (eventual

condition), and generates a new message with SIP header fields and an SDP body that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies); para. 0085, fig. 4c, the initial SIP Invite contains multiple fields and value--hence the SIP message generated by the UE1 after receiving a reply from UE2 assigns the chosen codec with respect to the previous SIP Invite based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2)).

Honeisen does not expressly disclose said path characterization metric condition assigning means is arranged to assign a different initial condition to a path characterization metric associated with subsequent data...the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information.

Kal discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. enable a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. the initial condition assigned in respect of said subsequent data differing from the initial condition

assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information) (fig. 2, col. 14, lines 19 to col. 15, line 11).

Honeisen and *Kal* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the new value of a resource setting as taught by Kal into the invention of Honeisen. The suggestion/motivation would have been to adjust allocation of a resource in a data communications channel (Kal, col. 9, lines 10-13).

As to claim 29, *Honeisen* and *Kal* further discloses a path characterization system according to claim 28, wherein the condition assigned to the path characterization metric is a value, and the predetermined target condition is a value (Honeisen, para. 0086-0087, AMR_MASK takes an initial value of all 1's (i.e. predetermined target condition), each binary 1 indicates support, each binary 0 indicates no support--para. 0096, the condition received by the UE2 indicates modified values of 1's to show no support for particular rates). In addition, the same suggestion/motivation of claim 28 applies.

6. **Claims 2, 7-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2003/0115332 A1 to *Honeisen* in view of U.S. Patent No. 7,433,311 B1 to *Kalyanasundaram et al.* ("*Kal*") and in further view of U.S. Publication No. 2003/0202469 A1 to *Cain*.

As to claim 2, *Honeisen and Kal* does not expressly further disclose a data network according to claim 1, wherein the condition of the path characterization metric at a node is indicative of a measure of congestion expected to be experienced by data on a path downstream of that node.

Cain discloses para. 0031, QoS parameter is based upon end-to-end delay, end-to-end delay variation, expected path durability, the QoS parameter pertaining to an updatable QoS metric.

Honeisen, Kal, and *Cain* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the QoS parameter as taught by Cain into the invention of Honeisen and Kal. The suggestion/motivation would have been to have a basis upon which to discover routing to a destination node (Cain, para. 0031).

As to claim 7, *Honeisen and Kal* does not expressly further disclose a data network according to claim 6, wherein said path characteristic relates to a measure of congestion on a path associated with that node.

Cain discloses para. 0031, QoS parameter is based upon end-to-end delay, end-to-end delay variation, expected path durability, the QoS parameter pertaining to an updatable QoS metric.

Honeisen, Kal and *Cain* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the QoS parameter as taught by Cain into the invention of Honeisen and Kal. The suggestion/motivation would have been to have a basis upon which to discover routing to a destination node (Cain, para. 0031).

As to claim 8, *Honeisen and Kal* does not expressly further disclose a data network according to claim 6 wherein said path characteristic relates to a measure of congestion on a path downstream of that node.

Cain discloses para. 0031, QoS parameter is based upon end-to-end delay, end-to-end delay variation, expected path durability, the QoS parameter pertaining to an updatable QoS metric.

Honeisen, Kal and *Cain* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the QoS parameter as taught by Cain into the invention of Honeisen and Kal. The suggestion/motivation would have been to have a basis upon which to discover routing to a destination node (Cain, para. 0031).

7. **Claims 17-19** rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2003/0115332 A1 to *Honeisen* in view of U.S. Patent No. 7,433,311 B1 to *Kalyanasundaram et al*. ("*Kal*") and in further view of U.S. Patent No. 6,633,538 B1 to *Tanaka et al*. ("*Tanaka*").

As to claim 17, *Honeisen and Kal* does not expressly disclose a feedback node according to claim 11, said feedback node also serving as said receiver node in said network.

Tanaka discloses duplicating the resource of the master node to each slave node and the master node representing the functions of each slave node while duplicating (abstract), i.e. a node (feedback) also can function as another node (receiver).

Honeisen, Kal and *Tanaka* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the duplication process as taught by Tanaka into the invention of Honeisen and Kal. The suggestion/motivation would have been to represent the functions of a node stopped (Tanaka, col. 1, lines 7-11).

As to claim 18, *Honeisen, Kal,* and *Tanaka* further disclose a feedback node according to claim 17, said feedback node being arranged to make available for the provider node a measure of a discrepancy between said predetermined target condition for the path characterization metric and the condition of the path characterization metric in respect of previous data received by said receiver node, whereby to enable said provider node to assign a different initial condition to the path characterization metric in respect of subsequent data (Honeisen, para. 0101-0106, the UE1 takes into consideration the discrepancies from what it initially requested (predetermined target, previous data), and what was provided in the reply (condition), and generates a new message with SIP header fields and an SDP body (subsequent data) that indicates a

chosen codec to use (i.e. assign a different initial condition based on received discrepancies); para. 0085, fig. 4c, the initial SIP Invite contains multiple fields and value--hence the SIP message generated by the UE1 after receiving a reply (para. 0101-0106, containing discrepancy in codecs supported by UE2 from those asked for from UE1) from UE2 assigns the chosen codec with respect to the previous SIP Invite (previous data, predetermined target) based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2); *Kal* discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. enable a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. the initial condition assigned in respect of said subsequent data) (fig. 2, col. 14, lines 19 to col. 15, line 11)). In addition, the same suggestion/motivation of claim 17 applies.

As to claim 19, *Honeisen, Kal* and *Tanaka* further disclose a feedback node according to claim 17, said feedback node being arranged to make available for the provider node information indicative of the condition of the path characterization metric in respect of previous data received by said receiver node, whereby to enable said provider node to assign a different initial condition to the path characterization metric in

respect of subsequent data in the event that said provider node determines that there is a discrepancy between said condition of the path characterization metric and said predetermined target condition for the path characterization metric (Honeisen, para. 0101-0106, the UE1 takes into consideration the discrepancies from what it initially requested (predetermined target, previous data), and what was provided in the reply (condition), and generates a new message with SIP header fields and an SDP body (subsequent data) that indicates a chosen codec to use (i.e. assign a different initial condition based on received discrepancies); para. 0085, fig. 4c, the initial SIP Invite contains multiple fields and value--hence the SIP message generated by the UE1 after receiving a reply (para. 0101-0106, containing discrepancy in codecs supported by UE2 from those asked for from UE1) from UE2 assigns the chosen codec with respect to the previous SIP Invite (previous data, predetermined target) based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2); *Kal* discloses a particular resource setting (i.e. path characterization metric) value (i.e. initial condition) for a rate is set, and when a negotiation event occurs such as an actual resource usage setting is different from a current resource setting (i.e. discrepancy information received/detected), a new value for the particular resource setting rate is calculated approximating the actual resource setting (i.e. enable a different initial condition). Furthermore, communications occur at a new rate (i.e. subsequent data) which is different from the communications that occurred at the previous rate, based on approximating the actual resource setting (i.e. whereby to enable said provider node to assign a different initial condition to the path

characterization metric in respect of subsequent data in the event that said provider node determines that there is a discrepancy between said condition of the path characterization metric and said predetermined target condition for the path characterization metric) (fig. 2, col. 14, lines 19 to col. 15, line 11)). In addition, the same suggestion/motivation of claim 17 applies.

8. **Claims 24-27** rejected under 35 U.S.C. 103(a) as being unpatentable over U U.S. Publication No. 2003/0115332 A1 to *Honeisen* in view of *Honeisen* in view of U.S. Publication No. 2002/0015395 A1 to *Karagiannis*.

As to **claim 24**, *Honeisen* discloses a method for providing path characterization information for nodes in a network, said network comprising a plurality of nodes including a provider node, a receiver node, and at least one intermediate node (figs 1-2, 0061, 0077, UE1 = provider node, feedback node, UE2 = receiver node, nodes in between them are intermediate nodes; .fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates, this being sent in an SIP invite (i.e. data containing metric) to intermediate nodes which send to UE2), the provider node being arranged to provide data to at least one intermediate node or to the receiver node, an intermediate node being arranged to receive data and to forward data to at least one other intermediate node or to the receiver node, and the receiver node being arranged to receive data from the provider node or from at least one intermediate node (figs 1-2, 0061, 0077, UE1 = provider node, feedback node, UE2 = receiver node, nodes in between them are intermediate nodes; .fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial

condition indicates it supports all available AMR rates, this being sent in an SIP invite (i.e. data containing metric) to intermediate nodes which send to UE2); the method comprising steps of:

assigning an initial condition to a path characterization metric in the event that said provider node provides data, said path characterization metric being associated with said data (fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates (i.e. in respect of SIP invite data sent by UE1));

updating the condition of the path characterization metric in the event that an intermediate node receives said data (para. 0088-0093, intermediate nodes modify the AMR_MASK (received from provider node) when they cannot support the bit rate, forward the message to each other then to UE2);

determining an eventual condition of the path characterization metric in the event that said receiver node receives said data (para. 0085, para. 0102-0106, fig. 4c, the initial SIP Invite contains multiple fields and value--hence the SIP message generated by the UE1 after receiving a reply from UE2 (containing eventual condition information that shows difference between initial request and what UE2 is capable of) assigns the chosen codec with respect to the previous SIP Invite based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2));

and establishing discrepancy information indicative of a measure of any discrepancy that exists between the eventual condition of the path characterization

metric and a predetermined target condition (para. 0085, para. 0102-0106, fig. 4c, the initial SIP Invite contains multiple fields and value--hence the SIP message generated by the UE1 after receiving a reply from UE2 (containing discrepancy information that shows difference between initial request (predetermined target) and what UE2 is capable of) assigns the chosen codec with respect to the previous SIP Invite based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2));

wherein, in the event that it is established that a discrepancy does exist between said eventual condition and said predetermined target condition, said method further comprises steps of:

assigning a different initial condition to a further path characterization metric in the event that said provider node subsequently provides further data, said further path characterization metric being associated with said further data, the initial condition assigned in respect of said subsequent data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information (para. 0101-0106, the UE1 takes into consideration the discrepancies from what it initially requested (predetermined target, previous data provided by said provider node), and what was provided in the reply (condition), and generates a new message (further data) with SIP header fields and an SDP body (further metric) that indicates a chosen codec (different initial condition) to use (i.e. assign a different initial condition based on received discrepancies));

updating the condition of said further path characterization metric in the event that an intermediate node receives said further data (para. 0106, codec of third message can be changed during the established session, i.e. nodes have already received third message).

Honeisen does not expressly disclose and making information indicative of said updated condition available to said intermediate node.

Karagiannis discloses an RSVP reservation state is updated periodically and this update is sent from the source through intermediate nodes to the destination (para. 0023, para. 0046-0047, fig. 3), i.e. intermediate node is aware of an update after path established.

Honeisen and *Karagiannis* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the Updates as taught by Karagiannis into the invention of Honeisen. The suggestion/motivation would have been to update soft states in order that they are not removed (Karagiannis, para. 0023, 0046).

As to claim 25, *Honeisen* and *Karagiannis* further disclose a method according to claim 24, wherein the condition assigned to the path characterization metric is a value, and the predetermined target condition is a value (Honeisen, para. 0086-0087, AMR_MASK takes an initial value of all 1's (i.e. predetermined target condition), each binary 1 indicates support, each binary 0 indicates no support--para. 0096, the condition

received by the UE2 indicates modified values of 1's to show no support for particular rates). In addition, the same suggestion/motivation of claim 24 applies.

As to **claim 26**, *Honeisen* discloses a method for providing path characterization information for nodes in a network, said network comprising a plurality of nodes including a provider node, a receiver node, and at least one intermediate node (figs 1-2, 0061, 0077, UE1 = provider node, feedback node, UE2 = receiver node, nodes in between them are intermediate nodes; .fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates, this being sent in an SIP invite (i.e. data containing metric) to intermediate nodes which send to UE2), the provider node being arranged to provide data to at least one intermediate node or to the receiver node, an intermediate node being arranged to receive data and to forward data to at least one other intermediate node or to the receiver node, and the receiver node being arranged to receive data from the provider node or from at least one intermediate node (figs 1-2, 0061, 0077, UE1 = provider node, feedback node, UE2 = receiver node, nodes in between them are intermediate nodes; .fig. 4c, para. 0085-0088, UE1 assigns an initial value to the AMR_MASK, the initial condition indicates it supports all available AMR rates, this being sent in an SIP invite (i.e. data containing metric) to intermediate nodes which send to UE2); the method comprising steps of:

assigning an initial condition to a path characterization metric in the event that said provider node provides data, said path characterization metric being associated with said data (fig. 4c, para. 0085-0088, UE1 assigns an initial value to the

AMR_MASK, the initial condition indicates it supports all available AMR rates (i.e. in respect of SIP invite data sent by UE1));

updating the condition of the path characterization metric in the event that an intermediate node receives said data (para. 0088-0093, intermediate nodes modify the AMR_MASK (received from provider node) when they cannot support the bit rate, forward the message to each other then to UE2);

determining an eventual condition of the path characterization metric in the event that said receiver node receives said data (para. 0085, para. 0102-0106, fig. 4c, the initial SIP Invite contains multiple fields and value--hence the SIP message generated by the UE1 after receiving a reply from UE2 (containing eventual condition information that shows difference between initial request and what UE2 is capable of) assigns the chosen codec with respect to the previous SIP Invite based on a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2));

and establishing discrepancy information indicative of a measure of any discrepancy which exists between the eventual condition of the path characterization metric and a predetermined target condition (para. 0085, para. 0102-0106, fig. 4c, the initial SIP Invite contains multiple fields and value--hence the SIP message generated by the UE1 after receiving a reply from UE2 (containing discrepancy information that shows difference between initial request (predetermined target) and what UE2 is capable of) assigns the chosen codec with respect to the previous SIP Invite based on

a difference pertaining to which codecs are supported by the UE2 (i.e. discrepancy information between UE1 and UE2));

wherein, in the event that it is established that a discrepancy does exist between said eventual condition and said predetermined target condition, said method further comprises steps of:

assigning a different initial condition to a further path characterization metric in the event that said provider node subsequently provides further data, said further path characterization metric being associated with said further data, the initial condition assigned in respect of said further data differing from the initial condition assigned in respect of previous data provided by said provider node by a difference dependent on said discrepancy information (para. 0101-0106, the UE1 takes into consideration the discrepancies from what it initially requested (predetermined target, previous data provided by said provider node), and what was provided in the reply (condition), and generates a new message (further data) with SIP header fields and an SDP body (metric) that indicates a chosen codec (different initial condition) to use (i.e. assign a different initial condition based on received discrepancies));

updating the condition of said further path characterization metric in the event that an intermediate node receives said further data (para. 0106, codec of third message can be changed during the established session, i.e. nodes have already received third message);

and making information relating to the discrepancy between the eventual condition of a previous path characterization metric and said predetermined target

condition available to said intermediate node (para. 0101-0106, reply (information) from UE2 is sent through intermediate nodes, reply indicating discrepancy between UE1 codec request (target), and what UE2 is capable of (eventual condition)).

Honeisen does not expressly disclose *and making information indicative of said updated condition available to said intermediate node*.

Karagiannis discloses an RSVP reservation state is updated periodically and this update is sent from the source through intermediate nodes to the destination (para. 0023, para. 0046-0047, fig. 3), i.e. intermediate node is aware of an update after path established.

Honeisen and *Karagiannis* are analogous art because they are from the same field of endeavor regarding data processing.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the Updates as taught by Karagiannis into the invention of Honeisen. The suggestion/motivation would have been to update soft states in order that they are not removed (Karagiannis, para. 0023, 0046).

As to claim 27, *Honeisen* and *Karagiannis* further disclose a method according to claim 26, wherein the condition assigned to the path characterization metric is a value, and the predetermined target condition is a value (Honeisen, para. 0086-0087, AMR_MASK takes an initial value of all 1's (i.e. predetermined target condition), each binary 1 indicates support, each binary 0 indicates no support--para. 0096, the condition received by the UE2 indicates modified values of 1's to show no support for particular rates). In addition, the same suggestion/motivation of claim 26 applies.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR GHOWRWAL whose telephone number is (571)270-5691. The examiner can normally be reached on M-Th 10a.m.-8:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick Ferris can be reached on (571)272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/O. G./
Examiner, Art Unit 2463

/Derrick W Ferris/
Supervisory Patent Examiner, Art Unit 2463